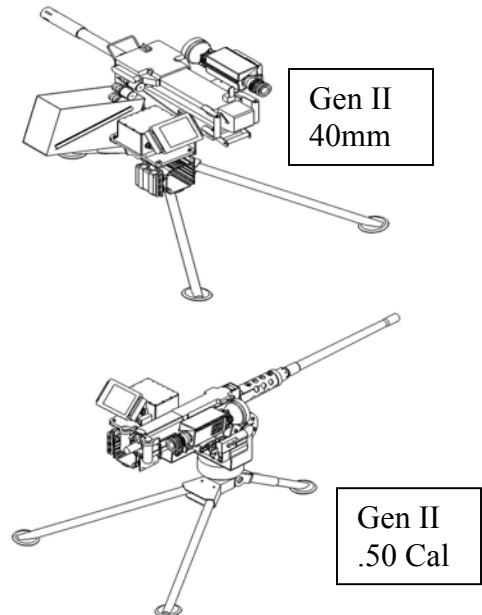


Heavy Machine Gun Technology Development Initiative (HMGTDI)

Purpose: This is a joint MCWL/ONR /NSWC Crane initiative that is intended to produce an advanced technology demonstrator to support the Improved Heavy Machinegun Universal Needs Statement (UNS) and Solution Initiating Directive. The UNS calls for improved 40mm and .50 caliber heavy machineguns, fire control capable of direct and indirect fire with current inventory optics in the direct fire mode, and an improved gun mount that incorporates both major and minor azimuth and elevation controls into the gunner's grips.

Background: Heavy Machineguns (HMG's) constitute the most responsive fire support asset available to the battalion commander to influence the battle space. Currently our machine gunners utilize aging weapons that are incurring an ever-increasing maintenance burden and due to inherent design characteristics cause several safety concerns. The gun-mounts used to aim and point our heavy machineguns use turn of the century traversing and elevating technology and are not particularly suited to indirect fire missions. There are limited provisions for mounting optics and no hyper elevation capability for using optics on the 40mm gun requiring gunners to employ offset aiming techniques beyond 800 meters that are inherently inaccurate. There are no provisions what so ever for true fire control offering ranging and ballistic compensation.



Description: HMGTDI is divided into two major developmental components; the Automatic Weapon Fire Control System (AFCS) being developed by ONR and the Advanced Common Mount (ACM) being developed by MCWL. AFCS utilizes a laser range finder (LRF), GPS, and Inertial Measurement Unit (IMU) in conjunction with a ballistic computer to provide ballistically compensated aiming cues to the gunner in direct and indirect fire modes of fire. The ACM project will develop a common compatible mount for the M2HB .50 caliber and the GMG 40mm heavy machineguns with hydraulic buffers for recoil attenuation.

Deliverable Product(s):

- (2) HMGTDI weapon systems with AFCS fire control ACM mounts and modern .50 caliber and 40mm HMG's.
- Test report from the Technical and Operator Testing of the systems.
- Technology Trade Off Study

Milestones:

| TASK | FY06 | FY07 |
|------------------------------|------|------|
| Gen III Design & Fabrication | ▲ | |
| Gen III T&E/Op-eval | ▲ | ▲ |
| Transition to MCSC | | ▲ |

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